



Armed Forces Health Surveillance Center

DoD Influenza Surveillance Report

Weekly Report of Activity

(Week Ending November 21, 2009)

Synopsis (Week 46):

- Influenza-like illness (ILI) and pneumonia and influenza (P&I) incidence rates continued to decreased with the exception of the US Overall which increased slightly from last week. (Fig. 1)
- The percent of all outpatient visits due to ILI for service members (SMs) and beneficiaries were above baseline and previous season percents (except PACOM beneficiaries) and decreased from last week (except PACOM SMs). (Fig. 2)
- The percent of all outpatient visits due to P&I for SMs and beneficiaries decreased from last week, but still remained above baseline and previous season percents. (Fig. 3)
- There have been 788 reportable medical event (RME) influenza cases (32.0% had been vaccinated against seasonal influenza) among SMs since week 40 (compared to 13 cases last season). An additional 1241 cases in total have been reported among other beneficiaries. (Fig. 4)

Description:

The first 3 figures present the weekly data on ILI and P&I events. These figures give an overview of the influenza season by incidence and all outpatient visits. This data can give a broad view of the pattern and severity of the season and allow the reader to compare seasonal patterns with previous years and between the U.S. and international regions. Figure 4 of this report provides data on influenza reportable medical events.

Incidence of Influenza (Figure 1):

Each week the incidence rates of ILI and P&I are calculated for active duty service members. The numerator comprises the sum of new events occurring during the week of interest. The denominator comprises the total number of persons at risk for that week. Rates are stratified by seasonal influenza vaccination status at the start of the week. Service members vaccinated against influenza at least 14 days prior to the start of the week are included in the vaccinated group. (Figure 1)

Percentage of Outpatient Visits Associated with Influenza (Figures 2 and 3):

The percentage of all outpatient visits that have an ILI (Figure 2) or P&I (Figure 3) diagnosis is calculated each week for (1) all service members, regardless of component and (2) all other DoD beneficiaries. Current proportions are graphed against the baseline** and data for the two prior influenza seasons for comparison.

Reportable Medical Events:

Each week the total number of influenza RME cases is determined for service members (including Active, Reserve, and National Guard components). In addition, the number of cases among all other military health system beneficiaries is calculated. For service members, the total number vaccinated at least 14 days prior to the RME date is also reported. Counts for all regions and services are presented in Figure 4.

(All data are preliminary and subject to change as updated data is received)

Figure 1. Incidence Rate of P&I and ILI among Active Duty Service Members

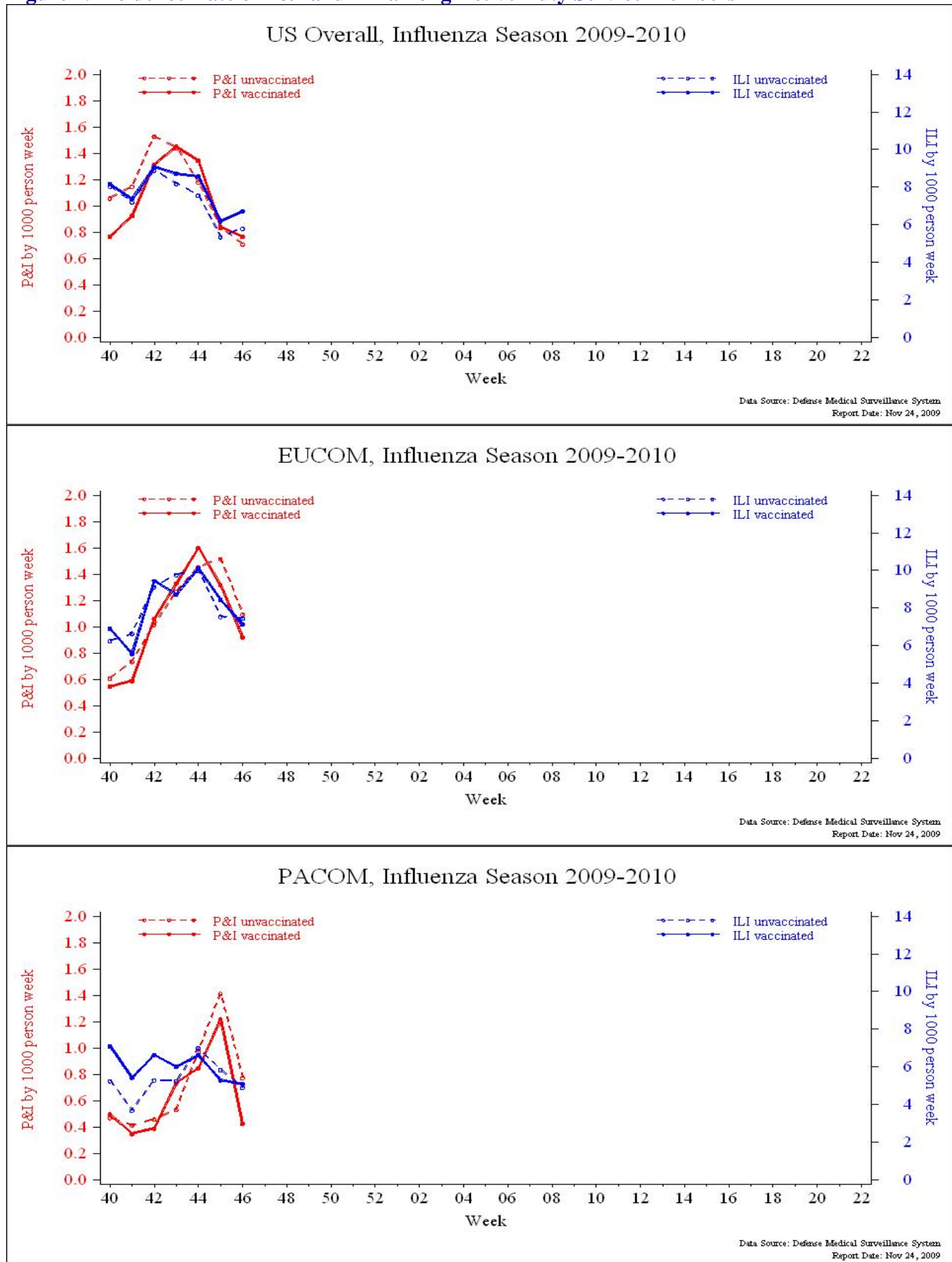
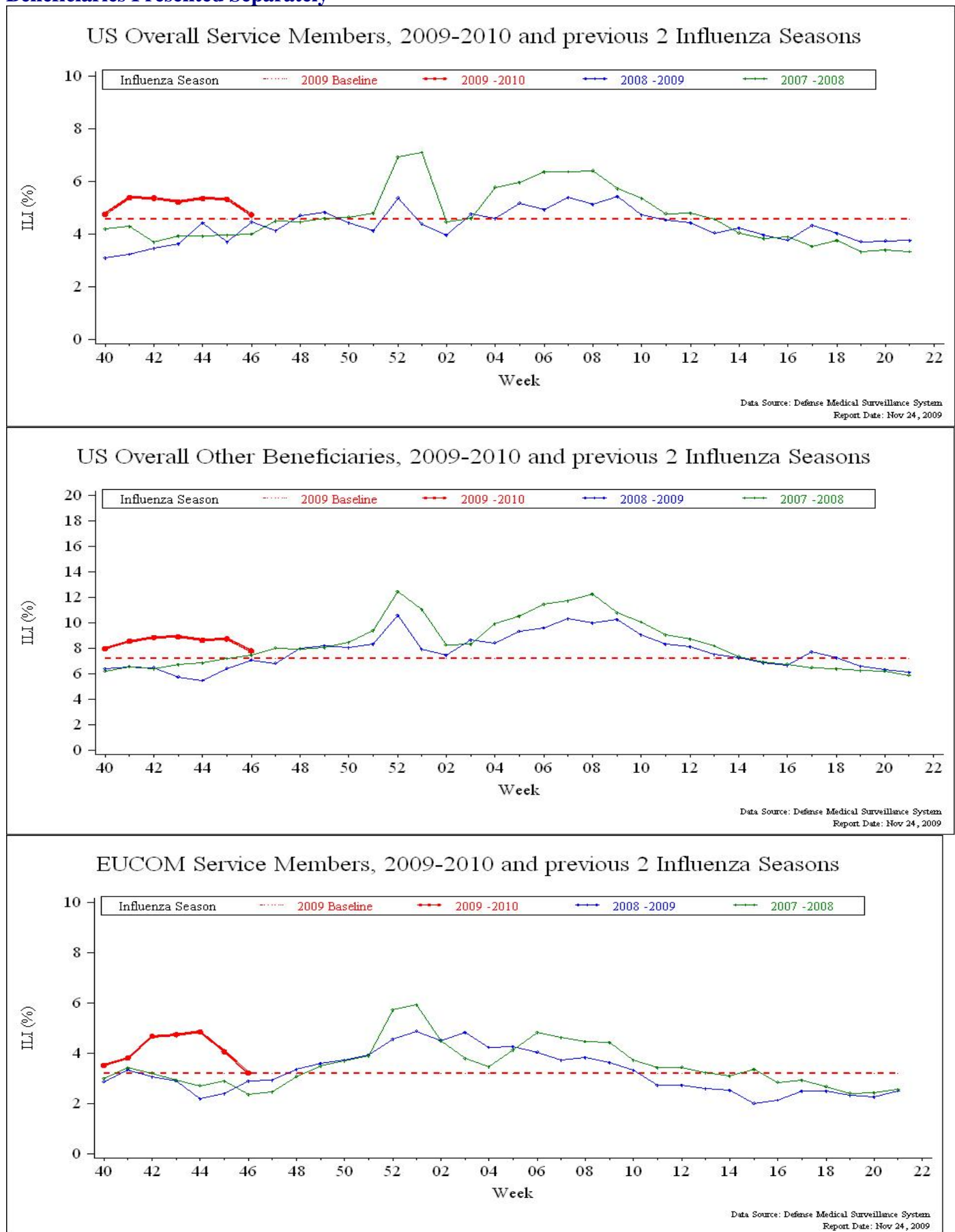
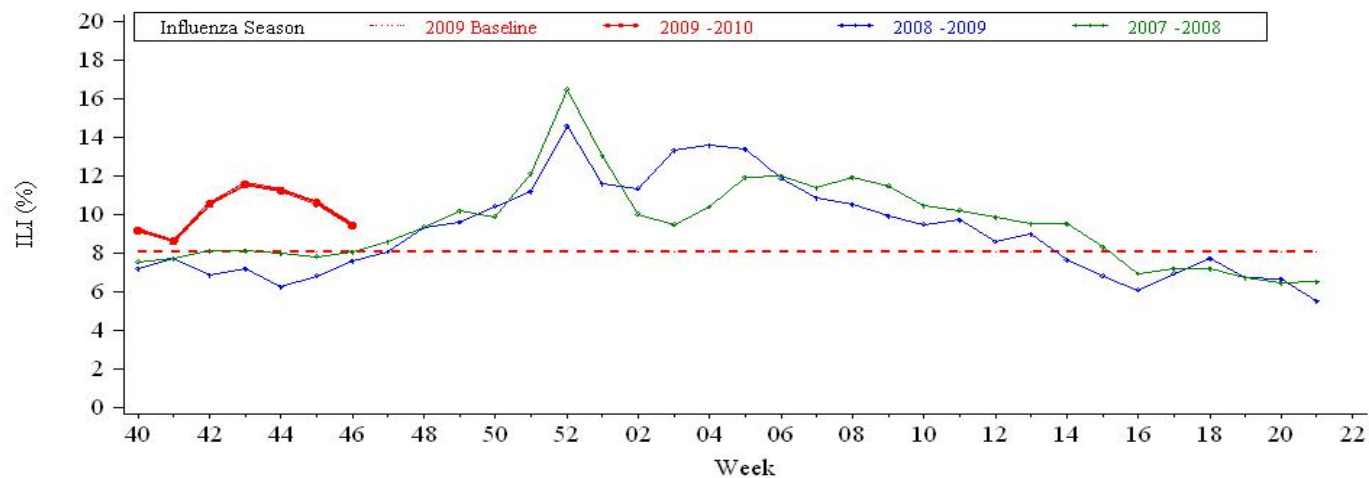


Figure 2. Percent of All Outpatient Visits with an ILI Diagnosis: Service Members and Other Beneficiaries Presented Separately

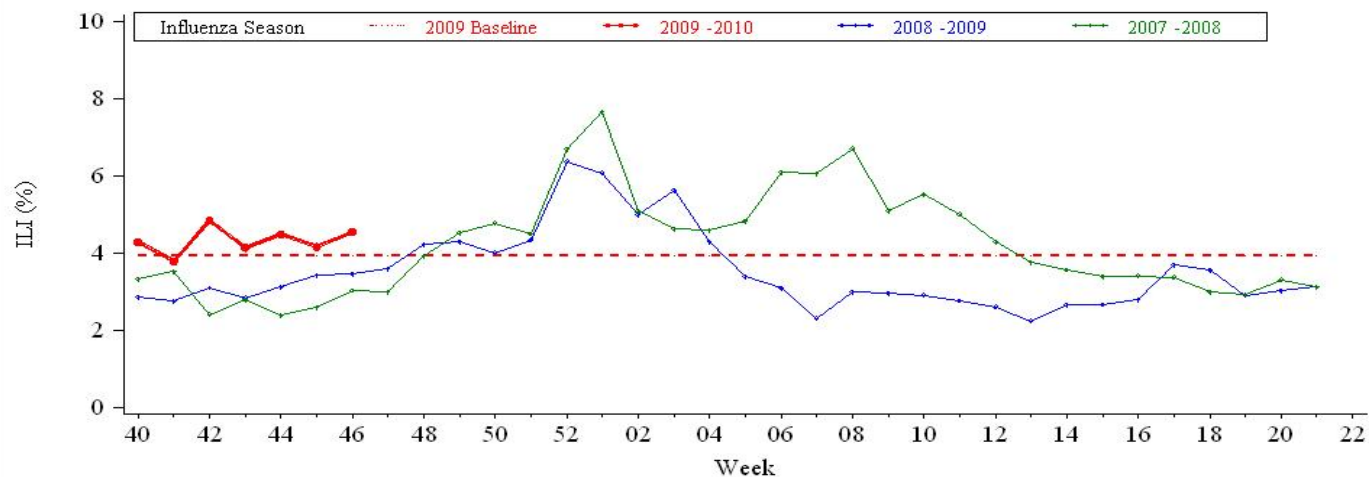


EUCOM Other Beneficiaries, 2009-2010 and previous 2 Influenza Seasons



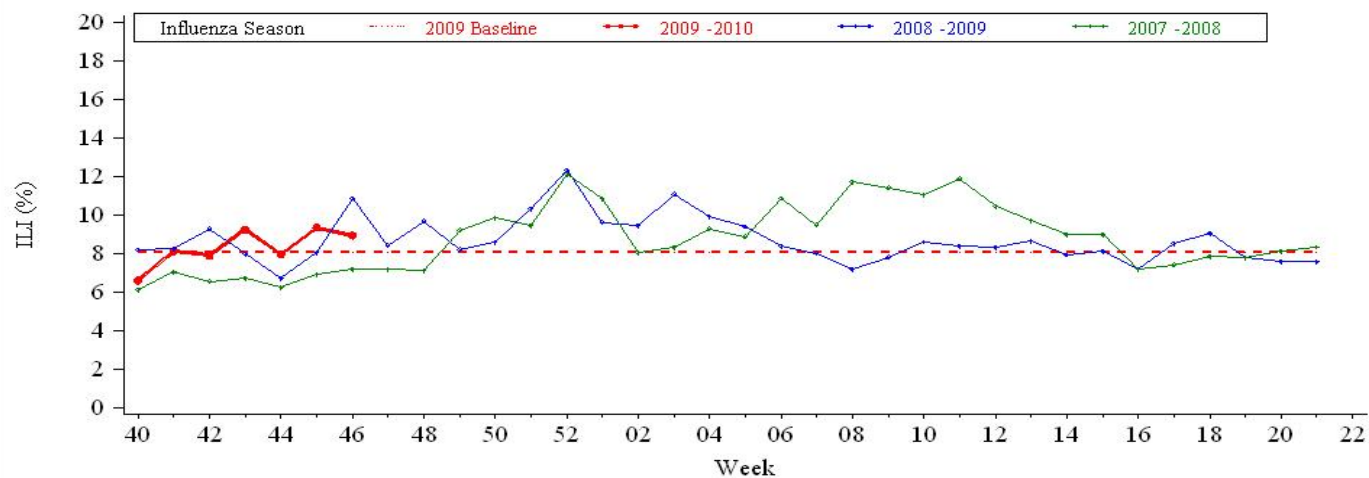
Data Source: Defense Medical Surveillance System
Report Date: Nov 24, 2009

PACOM Service Members, 2009-2010 and previous 2 Influenza Seasons



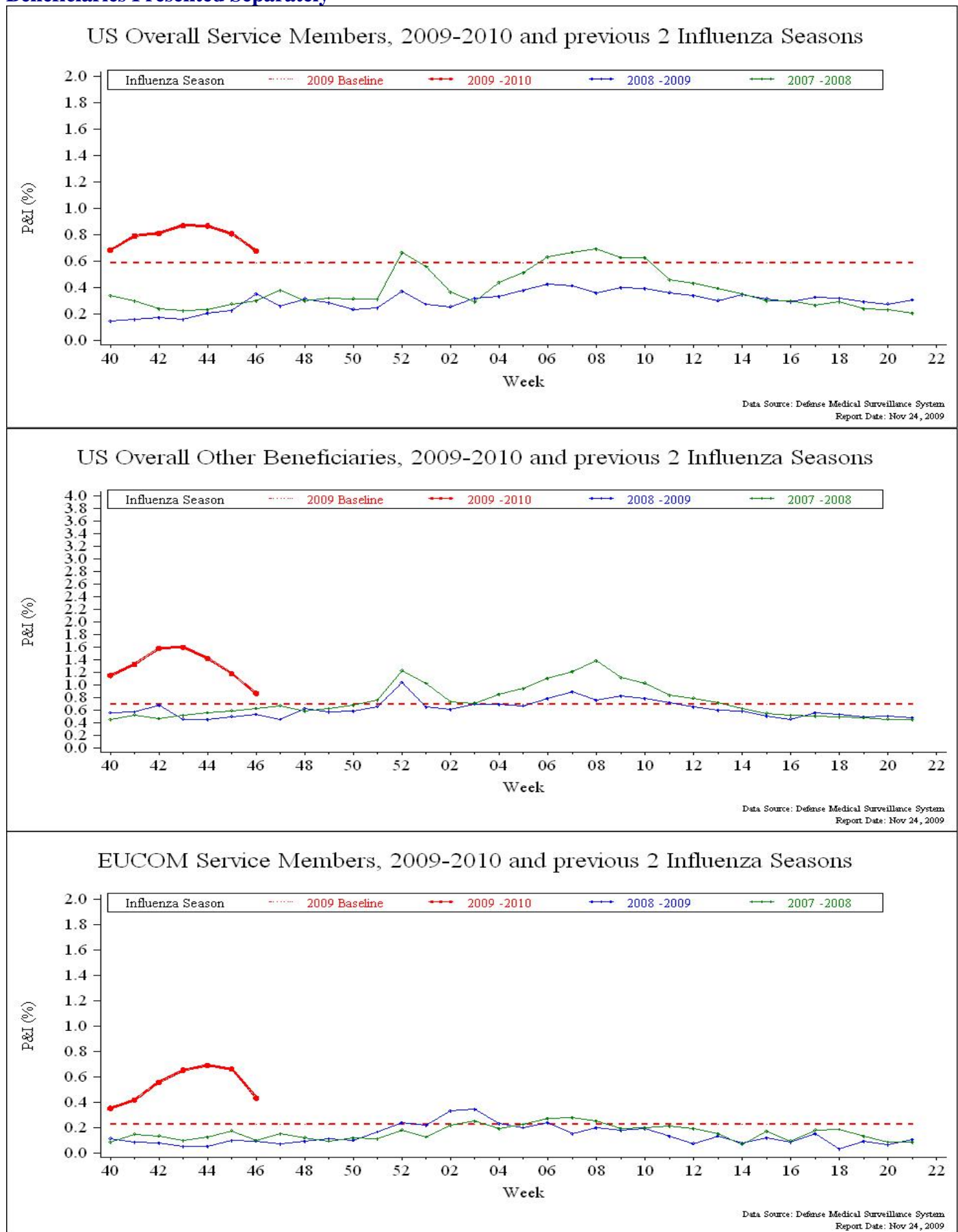
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Report Date: Nov 24, 2009

PACOM Other Beneficiaries, 2009-2010 and previous 2 Influenza Seasons

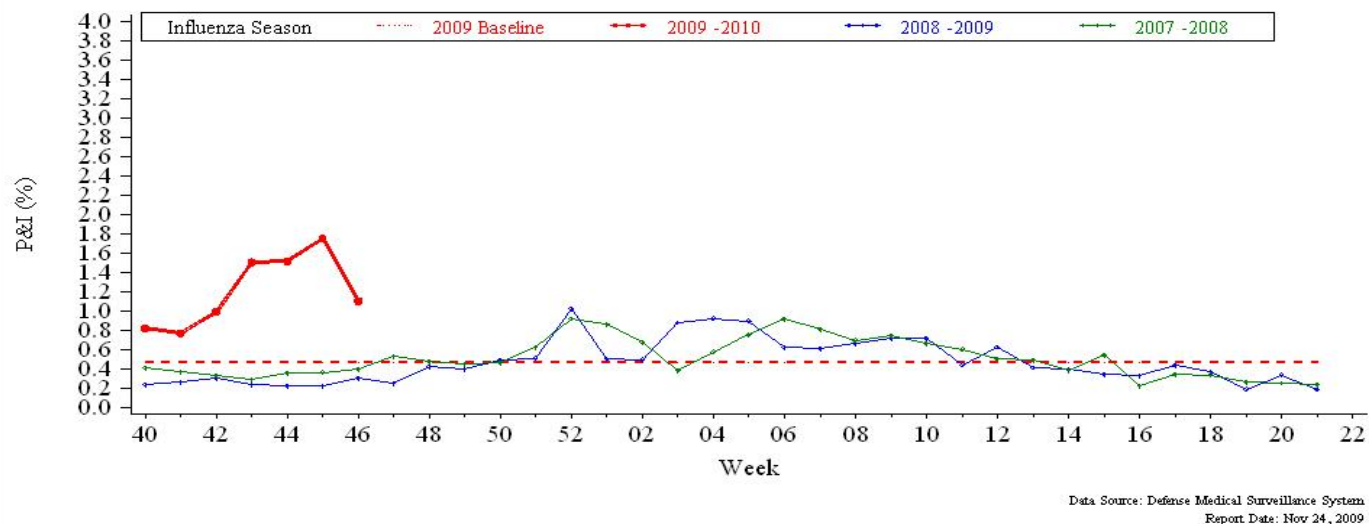


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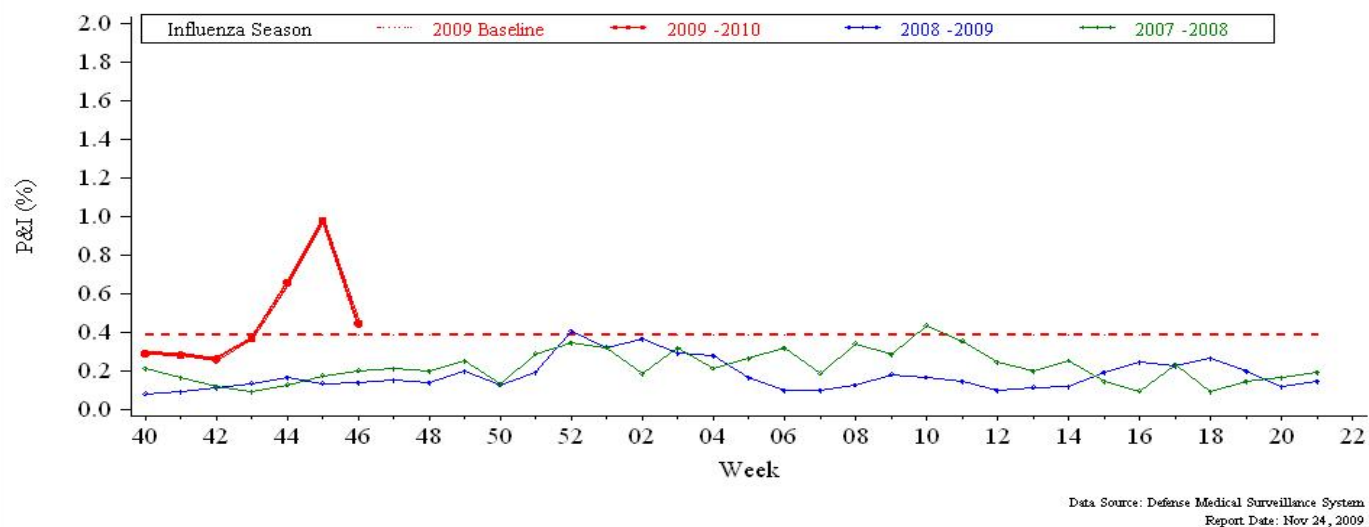
Figure 3. Percent of All Outpatient Visits with a P&I Diagnosis: Service Members and Other Beneficiaries Presented Separately



EUCOM Other Beneficiaries, 2009-2010 and previous 2 Influenza Seasons



PACOM Service Members, 2009-2010 and previous 2 Influenza Seasons



PACOM Other Beneficiaries, 2009-2010 and previous 2 Influenza Seasons

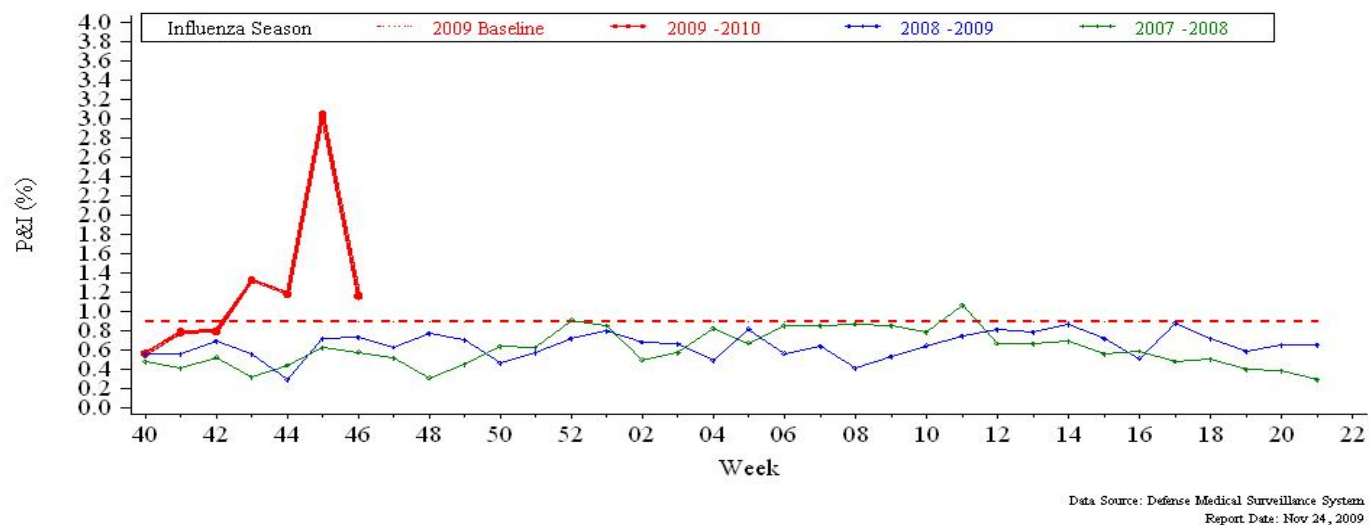
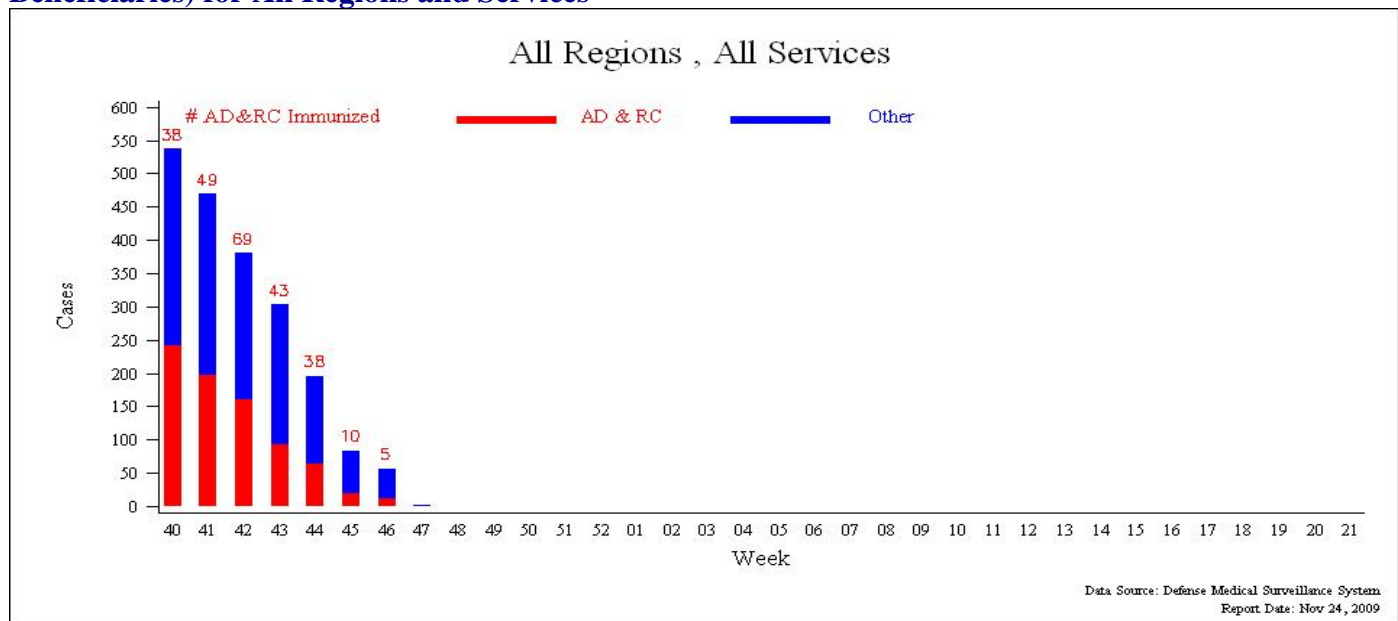


Figure 4. RME for Influenza: Confirmed cases (Active Duty (AD) & Reserve Component (RC) vs. Beneficiaries) for All Regions and Services



Background:

AFHSC maintains the Defense Medical Surveillance System (DMSS) which is a database containing up-to-date and historical data on medical encounters, vaccinations, and personnel and demographic data about service members from all military services. Using ICD-9 codes from hospitalization and outpatient encounters, and influenza vaccination data contained within the DMSS, AFHSC produces weekly summaries of respiratory illness activity among military health system beneficiaries by geographical regions. Two primary outcomes are used for this surveillance: Influenza-like Illness (ILI) and Pneumonia and Influenza (P&I). ILI is defined as a health care encounter that resulted in a diagnostic (ICD-9) code of 79.99, 382.9, 460, 461.9, 465.8, 465.9, 466.0, 486, 487.0, 487.1, 487.8, 490, 780.6, or 786.2. P&I is defined as an ICD-9 code of 480-487.

AFHSC also receives standardized case reports of RME from all services. The military's RME system requires reporting of additional infections not included by the Centers for Disease Control and Prevention's Nationally Notifiable Diseases Surveillance System, including influenza. Respiratory illnesses that meet a clinical case definition (sudden onset of fever $>102.2^{\circ}\text{F}$, respiratory systems, myalgia and headache) and are laboratory confirmed as influenza are reportable.

For regions outside the United States information is summarized by DoD Combatant Commands. For regions within the United States information is summarized by CDC defined regions. These include: (1) New England (Connecticut, Maine, Massachusetts, New Hampshire, Vermont, Rhode Island), (2) Mid Atlantic (New Jersey, New York, Pennsylvania), (3) East North Central (Illinois, Indiana, Michigan, Ohio, Wisconsin), (4) West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota), (5) South Atlantic (Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington, D.C., West Virginia, US Virgin Islands, Puerto Rico), (6) East South Central (Alabama, Kentucky, Mississippi, Tennessee), (7) West South Central (Arkansas, Louisiana, Oklahoma, Texas), (8) Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming), and (9) Pacific (Alaska, California, Hawaii, Oregon, Washington).

**For figures 2 and 3, the overall and region baseline is the percentage of outpatient visits for ILI or P&I during non-influenza weeks (weeks 22-39) over the past 3 years plus two standard deviations.